

**REMARKS**

Reconsideration and allowance of this application are respectfully requested.

Claims 1-18 are pending in the application.

Claims 5 and 7-10 are rejected under 35 U.S.C. 101 as containing non-statutory subject matter.

Claims 1-18 are rejected also under 35. U.S.C. 103(a).

Applicants respectfully traverse these rejections.

**I. Claim Rejection under 35 U.S.C. 101**

Applicants respectfully submit that amended claims are directed to a statutory subject matter and requests withdrawal of this rejection.

**II. Claim Rejection under 35 U.S.C. 103(a)**

**Claim 1**

Applicants have amended claim 1 to improve clarity.

In rejecting claim 1, the Examiner indicates the structural elements of Ullman's apparatus for controlling a video game as teaching three elements of claim 1. Specifically alleged are that:

- i) the finger-motion detecting unit of claim 1 is taught by the plurality of detectors (2a-5a, 2b-5b and 6-10 of Figs. 2 and 6) for detecting hand directional movement and a signal generator (11 of Figs. 2 and 6);
- ii) the finger-motion signal transmitting unit of claim 1 is taught by the electronic module (100 of Fig. 7) for wirelessly transmitting the commands; and

- iii) the finger-motion signal receiving unit of claim 1 is taught by the receiver of a video game controller (Fig. 9), respectively.

Applicants respectfully disagree with the Examiner's rejection based on the above allegation as below.

First, Ullman's detectors do not generate a finger-motion signal, while the claim 1 detectors are designed to generate such a finger-motion signal corresponding to a user's finger motion. Ullman's detectors (6-10) are designed to generate a detection signal only when they contact one another, by which a predetermined static action such as a "firing" or "jumping" mode in a video game is selected. In Ullman, to generate the detection signal through contacts among the detectors (6-10), one detector (6) needs to be grounded. Even when there is a sufficient motion of a finger, a detection signal is not generated as long as there is no contact between the detectors 7-10 and the detector 6. This finding is specifically supported in Col. 3 line 64 through Col. 4 line 3 of Ullman which reads that the signals are not based on movement of the fingers or of the hand.

The other detectors (2a-5a and 2b-5b) of Ullman also are not supposed to generate a finger-motion signal as in claim 1. Structurally, they are designed to be disposed on the wrist portion of a hand, the structure of which cannot inherently detect a finger-motion. Functionally, these Ullman detectors detect hand directional movements so that each combination of contacts between the detectors indicates a predetermined direction. Such functional aspect of the Ullman detectors is also different from that of the claim 1 which discloses how to detect a finger-motion. Thus, the circuitry of the detectors (2a-5a and 2b-5b) cannot be alleged to teach or suggest the detection unit of claim 1.

Secondly, the electronic module (100 of Fig. 7) also cannot be structurally or functionally equivalent to the finger-motion signal transmitting unit of claim 1. As disclosed in claim 1, the transmitting unit uses the power signal generated by a separately arranged finger-motion signal receiving unit. That is to say, the transmitting unit of claim 1 does not have a power source within its structure. However, Ullman's electronic module has a power source as described in Col. 5, lines 33-35. In addition, while the finger-motion signal transmitted from the transmitting unit is read by the finger-motion signal receiving unit, which is also an element of the finger-motion detecting apparatus, the command signal from Ullman's electronic module, allegedly corresponding to the finger-motion signal, is transmitted to an external video game controller, which is not equivalent to the finger-motion signal receiving unit. Thus, Ullman's electronic module also cannot be alleged to teach or suggest the transmitting unit of claim 1.

Lastly, Ullman's receiver, which is a part of an external video game controller, does not teach or suggest the finger-motion signal receiving unit of claim 1, either. As discussed above, Ullman's receiver does not generate a power signal which is wirelessly used by the electronic module, because the electronic module operates on its own power source (battery). As also discussed above, Ullman's receiver is not an element of the finger-motion detecting apparatus, but an element of a video game controller, which is not a part of claim 1 disclosure. In addition, Ullman's receiver is not to determine which finger is moved but to determine whether there has been detection of a contact. Thus, Ullman's receiver does not disclose the finger-motion signal receiving unit of claim 1.

To sum up the above analysis, Ullman fails in teaching or suggesting the finger-motion detecting apparatus in claim 1 which is configured to detect a finger motion using (sharing) the

wireless power signal generated by the finger-motion signal receiving unit. Therefore, claim 1 should be patentable.

**Claims 2-3**

Claims 2-3 should be allowable based on their dependency on claim 1.

**Claim 4**

The Examiner iterates the reasoning for claim 1 rejection to assert that the control unit of claim 4 is obvious over Ullman in view of Ishikawa.

As discussed above, however, it should be noted again that each element of the claim 1 apparatus are different from those of Ullman's apparatus in their respective functions and structures. Particularly, the function of the control unit described in claim 4 is not taught or suggested by the prior art. The combination of the two prior art references does not teach or suggest the operation of modulating the finger-motion signal into a finger motion signal having a predetermined frequency, depending on which finger is moved.

Thus, claim 4 should also be patentable. It should also be allowable based on its dependency on claims 1 and 2.

**Claim 5**

In rejecting claim 5, the Examiner alleges that the configuration of the coil unit in claim 5 (winding-about a finger) is obvious since Applicants have not stated any problem or particular purpose for such configuration. However, Applicants respectfully disagree with the Examiner's view, because the claim 5 configuration of the coil is one of the configurations which can be

conveniently adapted to a finger to detect a finger-motion compared to prior art references. In the specification, Applicants have already described the restriction of the conventional wearable finger-motion detection device. In response to such restriction, the present apparatuses and methods facilitating a convenient finger-adaptable motion detector have been invented.

Thus claim 5 claiming a specific configuration of a coil unit should be patentable regardless of its dependency on claims 1 and 2.

**Claim 6**

This claim should be allowable based on its dependency on claim 1.

**Claim 7**

In rejecting claim 7, the Examiner alleges that the Ullman's contacts (2a-5a and 2b-5b) and their function disclose the claim 7 switch which generates a finger-motion signal by flexing a finger joint.

Continuing from the claim 1 analysis, while Ullman's contacts are designed to be disposed on the wrist portion of a hand, the claim 7 finger-motion detectors (including switches) are configured to be mounted on the fingers. Further, while Ullman's contacts detect hand directional movements so that each combination of contacts between the detectors indicates a predetermined direction, the claim 7 detectors are configured to detect a finger-motion. Again, there are structural and functional differences between Ullman's contacts and claim 7 switches.

Thus claim 7 should be patentable regardless of its dependency on claim 6.

**Claims 8-10**

These claims should also be allowable based on their dependencies on claim 6.

**Claims 11-18**

The Examiner has rejected these claims based on the same reasoning that she relies on to reject corresponding apparatus claims. For the same reasoning we presented for corresponding apparatus claims, these method claims should also be allowable.

**III. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


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**23373**

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